

Objections to the Expert Panel Report
Prepared by
Panel Members
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Introduction

In developing its Report to the General Assembly, the Expert Panel was limited by several factors. Chief among these factors was a lack of well designed and peer reviewed studies to determine if a relationship between exposure of a population to biosolids at land application sites and subsequent reported health symptoms exists. In addition, the complete characterization of biosolids to identify and quantify every inorganic chemical, organic chemical, and microbiological species present in biosolids has never been accomplished, and realistically may never be, due to analytical limitations and the considerable financial costs.

With these research and data collection goals not satisfied, the nature of the relationship between exposure to biosolids and reported health symptoms cannot be confirmed from a scientifically documented perspective. The Panel was therefore left to consider reports by citizens who described health symptoms following exposure to biosolids by residing in close proximity to biosolids land application and/or storage sites.

Alan Rubin and Henry Staudinger (“Rubin/Staudinger”) came to the Panel from very different perspectives. Rubin was directly involved in the development of EPA’s Part 503 biosolids regulations. While at EPA, Rubin was also responsible for defending the scientific credibility of the Part 503 rule to protect public health and the environment as well as to articulate the benefits of utilizing biosolids for its nutrient and soil amending properties as a resource in agriculture, silvaculture, land reclamation, and in lawn and garden products.² As a result of Rubin’s activities at EPA, many citizens blame Rubin as the “face” of EPA policy and regulations on biosolids land application for their illnesses following their exposure to biosolids.

Today, Rubin continues to take the position that the land application of biosolids is largely protective of public health and the environment if all Part 503, State, and local biosolids regulations are followed, with one very critical exception, that being the general disregard in the Part 503 Rule and to some extent in the Commonwealth of Virginia biosolids regulations of both “Health Sensitive Individuals” and “Pollution Sensitive Sites”. Staudinger’s involvement for more than a decade has been to secure better protection for citizens who were forcibly exposed to land applied biosolids. Staudinger does not share Rubin’s confidence in current biosolids regulations and questions the adequacy of their enforcement.

As Rubin/Staudinger considered the charge of the General Assembly, they found one issue on which they could agree -- the need to address the adequacy of current laws and

regulations as they apply to “Health Sensitive Individuals” and “Pollution Sensitive Sites”. Neither had been meaningfully considered by EPA’s risk assessment in the development of the Part 503 standards, and both were left to states like the Commonwealth of Virginia to address.

Virginia biosolids regulations that address a number of pollutions sensitive sites by precluding applications on those sites together with the use of buffers to reduce both health and water quality risks were noted. The need to consider other sites was brought to the attention of the Panel. The lack of similar biosolids regulations to protect Health Sensitive Individuals was also noted. Because of citizen’s health complaints and concerns, Rubin/Staudinger focused primarily on addressing the exposure of Health Sensitive Individuals to biosolids at biosolids land application sites.

Objections to the Panel Report

Although the focus of the Panel’s discussions was the potential adverse impact on Health Sensitive Individuals following exposure to biosolids at land application sites, this focus was not reflected in the written Report. Instead, against the objection of some Members, the Report addresses the potential impact on healthy individuals.

By inference or by omission of information, the Report ignores and/or at best understates the potential impact from exposure to biosolids on Health Sensitive Individuals and incorrectly leaves the impression that this is the view of the Panel. Through verbal, video and written submissions, citizens of Virginia provided vivid and compelling accounts of their illnesses, which they said occurred and continue to occur following repeated exposure to biosolids at land application sites.

With the scientific limitations as described above, these reports of citizens were the only information the Panel could rely on as it assessed whether exposure to biosolids was associated with human health impacts. The Final Draft of the Report was deficient in not recognizing this and responding accordingly.

Sample statements in the Report are illustrative of deficiencies that the General Assembly should be aware of:

Report: “The Panel uncovered no evidence or literature verifying a causal link between biosolids and illnesses”

Objection: This statement is misleading as (1) there have been no scientifically-validated studies attempting to verify a causal link involving exposure of Health Sensitive Individuals to biosolids and their reported health symptoms, (2) the lack of constituent information makes it virtually impossible to conduct such a study, and (3) EPA failed to conduct a risk assessment of Health Sensitive Individuals in developing its Part 503 Standards. The proper statement should have been that the Panel could not find evidence in the scientific literature verifying a causal link between

exposure to biosolids and illnesses for the reasons set forth above.
(Emphasis added)

Report: “The Panel was presented with comments from Virginia residents in regard to their concerns about biosolids and the alleged negative impact on their health.” [Emphasis added.]

Objection: Virginia residents also provided physician letters and offered to provide medical records to further document their claims. The Panel failed to pursue that offer as a result of objections of some Panel Members to investigate those complaints further. No Panel member, Panel meeting observer, industry representative, or any member of Virginia DEQ or VDH regulatory staff challenged the testimony of these citizens. Thus the proper statement should have been that “the Panel was presented with comments from Virginia residents describing negative health impacts following exposure to biosolids.”

Report: “These farmers reported no ill effects to themselves, their families or their livestock.”

Objection: Unlike the characterization of the above adverse health impacts as allegations, the Report did not attain a proper balance by failing to state that the comments by these farmers were undocumented and that there was no claim that any of those farmers or members of their families were Health Sensitive Individuals.

Report: The Report includes language from selected studies that indicated that the “risks to human health posed by microbiological entities within biosolids have been shown to be low if current USEPA regulatory guidelines are followed”

Objection: Inclusion of this information should have been accompanied by a clear statement that the studies did not address, much less apply to risks to Health Sensitive Individuals (who were not included in EPA’s risk assessment), and that they did not address the exposure of these individuals to the many other constituents that could be present in any given biosolids.

Report: “Panel members agreed that there is a perceived relationship between odor and health issues”

Objection: The Report should have stated that “Studies have found that odors can and do adversely affect health, and that the Panel had no basis for excluding odor as a factor in adverse health symptoms reported in Virginia.” The Panel was presented with separate papers by Drs. Susan Schiffman and William Toffey (former biosolids manager for the City of Philadelphia, one of the largest biosolids land application program in the U.S.) stating that there is a clearly defined link between adverse human health impacts when people are exposed to malodorous organic materials such as malodorous biosolids and animal manures. [The Report barely mentions one paper

(Schiffman) and neglects to discuss the second (Toffey), citing only the second paper in its bibliography.]

- Report: The Report does not include a number of recommendations urged by Individual Panel Members such as Rubin/Staudinger.
- Objection: The explanation for the exclusion of important recommendations by individual Panel Members was that only consensus recommendations were included. That was not a requirement in the charge given to the Panel by the General Assembly. Moreover, this decision was made without a vote by the Panel. Exclusion of key recommendations without Panel Member votes leaves unknown which members were responsible for excluding specific recommendations and the reasons for those exclusions. Such exclusions are inappropriate for a Report intended to provide information to the General Assembly as it evaluates what action, if any, should be taken to address citizen's health concerns.
- Report: The Report ascribes its failure to perform a detailed analysis of the chemical and biological composition of biosolids to a lack of funding.
- Objection: The Report should have made clear that no amount of funding would have enabled the Panel to secure this information and that it is unlikely that such an analysis will ever be performed due to costs and analytical limitations.

Because of deficiencies such as those set forth above, the Report does not adequately or accurately address the persistent health complaints from citizens of the Commonwealth.

Protection of Health Sensitive Individuals Must be a Priority of the General Assembly

Citizens have long complained of adverse health symptoms following exposure to biosolids. The Virginia Department of Health (VDH) when it regulated the Commonwealth's biosolids program had difficulty addressing those complaints – due to the lack of biosolids' constituent information and the absence of scientific studies to explain why some individuals exposed to biosolids suffered adverse health symptoms and others did not.

The lack of biosolids constituent information and scientific studies also made it difficult for the Panel to reach consensus as to how to address individuals who experienced adverse health symptoms. Moreover, time constraints imposed upon this Panel to complete this Report to satisfy a General Assembly deadline and public notice requirements under the Virginia Administrative Procedures Act made it impossible for Panel Members to adequately reduce that issue to concise written language. Because this is such an important issue, Rubin/Staudinger submit this Supplement in an effort to make the General Assembly aware of the Report limitations.

Because exposure to land applied biosolids does not cause adverse health symptoms in many of those who are exposed, those who do experience adverse health symptoms are

identified as Health Sensitive Individuals. Those individuals should be excluded from exposure to biosolids in the same manner as biosolids are excluded from being applied at Pollution Sensitive Sites.

However, unlike Pollution Sensitive Sites, the Panel could not look to EPA for initial guidance as EPA's risk assessment did not consider Health Sensitive Individuals. As stated above, the Panel also could not look to scientific studies, because none addressing Health Sensitive Individuals were found. The lack of a complete analytical characterization of biosolids constituents indicates that it is impossible to address this issue through scientific studies. Under these circumstances, it is not entirely surprising that regulations have not been developed to identify and protect Health Sensitive Individuals. However, if land application is to be permitted in the Commonwealth, this deficiency must be corrected.

A report of adverse health symptoms following exposure to biosolids should be sufficient to identify an individual as Health Sensitive. However, because this is a medical issue, the process of identifying Health Sensitive Individuals could be accomplished better by having medical professionals evaluate the adverse health symptoms, and obtaining their opinions on whether biosolids could have caused the adverse health symptoms or aggravated preexisting adverse health symptoms.

Once Health Sensitive Individuals have been identified, it should be the responsibility of DEQ to treat such individuals in the same manner as Pollution Sensitive Sites and implement requirements to avoid exposing such individuals to land applied biosolids. Suggested tools for doing so have been set forth in the Report.

Addressing citizens' health complaints is essential to a credible, viable land application program. It is important that the General Assembly take appropriate action to ensure the Health Sensitive Individuals are protected, whether in the manner suggested above, or in some other manner that would assure such protection.